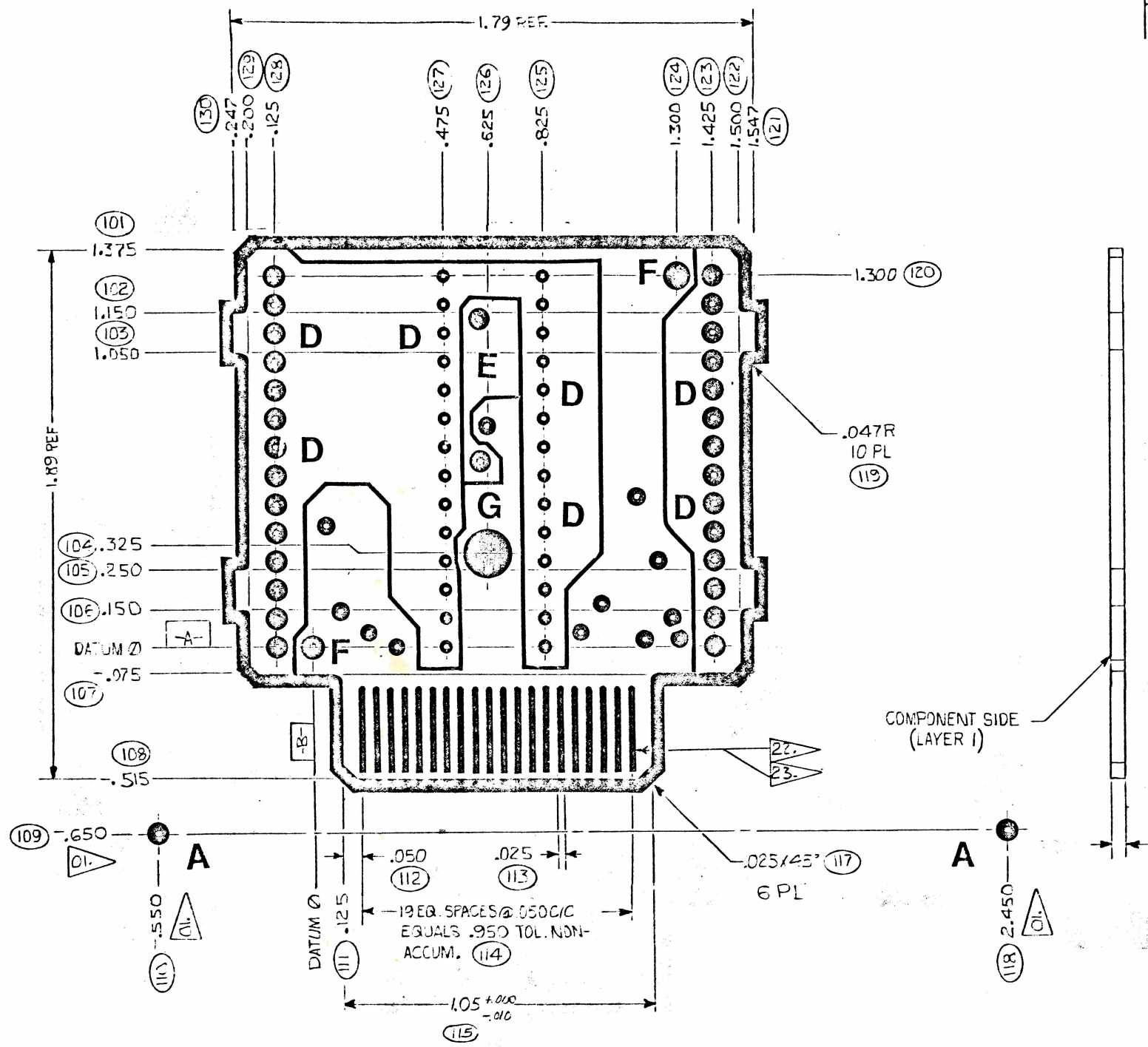


- NOTES: UNLESS OTHERWISE SPECIFIED
01. EXTERNAL TOOLING HOLE DIMENSIONS.
 02. MINIMUM ANNULAR RING .001 EXCEPT BREAK OUT PERMITTED ON TRIMMED PADS.
 03. MAX. INTERNAL RADIUS ~~.050~~ MAX. EXTERNAL RADIUS ~~.063~~.
 04. NO DEBURR REQUIRED.
 05. CRAZING AND DELAMINATION WITHIN A MAX. OF .030 BOARD PERIMETER SHALL BE ACCEPTABLE.
 06. HOLE LOCATION: ~~(A, B, D14 S) (RFS) OR (A, B, D10 S) (MMC)~~.
 07. ALL HOLES NOT DIMENSIONED ARE ON .025 INCH GRID INCREMENTS IN RELATION TO DATUM 0.
 08. DECIMAL HOLE DIAMETERS AND HOLE TOLERANCES GOVERN HOLE SIZE. ~~NUMBERS IN PARENTHESIS ARE FOR REFERENCE ONLY.~~
 09. FINISHED ARTWORK CONDUCTOR WIDTH AND SPACING TO BE AS SHOWN ON MASTER PATTERN ± .004.
 10. BOARD WARP OR TWIST SHALL NOT EXCEED .020 INCH PER INCH LENGTHWISE AND SHALL NOT EXCEED .018 INCH PER INCH CROSSWISE.
 11. NO CLEARANCE REQUIRED FROM CONDUCTOR TO EDGE OF BOARD AND SLOTS.
 12. MATERIAL SHALL BE ~~1.0~~ THK NEMA GRADE FR-4 OR G-10 WITH ONE OZ. COPPER BOTH SIDE.
 13. PROCESSES: TIN LEAD 60/40 PLATE, .0003 THK MIN. PER QQ-5-571 "REFLOWED" BEFORE SOLDER MASK IS APPLIED.
 14. SOLDER MASK SHALL BE SCREENED ON BOTH SIDE S USING PC 401 OR APPROVED EQUIVALENT. COLOR TO BE GREEN.
 15. SOLDER MASK IS PERMITTED TO BLEED ON PADS OF CONDUCTOR SIDE WHERE PADS ARE TRIMMED AND ON COMPONENT SIDE OF BOARD.
 16. MARK PER ANSI Y32-16-1962, METHOD SILK SCREEN, HEIGHT PER ARTWORK PROVIDED, COLOR CONTRASTING (F100 METHOD 1, CLASS 1).
 17. REGISTRATION MARKS TO BE USED FOR POSITIONING MARKING AT HOLES SHOWN.
 18. THIS PWB IS AN UL RECOGNIZED COMPONENT AND, SUCH AS, MUST DISPLAY THE VENDORS MARK RECOGNIZED BY UL IN THE AREA OF THE PWB INDICATED.
 19. SOLDER MASK ALLOWED TO BLEED A MAX. OF .005 ONTO THE PAD.
 20. NO ANNULAR RING REQUIREMENTS ON OVAL PADS.
 21. SOLDER MASK PERMITTED TO COVER TIN LEAD PLATED COPPER AREAS GREATER THAN .250 INCH.
 22. ELECTROLESS NICKEL PLATE PER CL. I, CLASS B (F-38 METHOD 2) THICKNESS TO BE .0003 MIN. OR ELECTROPLATE A LOW STRESS NICKEL .0002 MIN. THK FREE FROM VISIBLE BLISTERS, PITS, NODULES, CRACKS OR OTHER DEFECTS. IPC TAPE TEST SHOWS NO SEPARATION OF NICKEL FROM COPPER, NO COHESIVE FAILURE OR NO SEPARATION OF SUCCEEDING TOP COAT.
 23. ELECTROPLATE GOLD PER MIL-S-45204, CL. II OR F-24, CL. 2, .00005 MIN. THK. MIN. GOLD PLATING THICKNESS ON FINISHED PCB .000005. GOLD SHALL BE ADHERENT (IPC TAPE TEST), HAVE UNIFORM COVERAGE AND GOLD COLOR WITH NO EVIDENCE OF POROSITY.
 24. ALL HOLES TO BE WITHIN .014 INCH TRUE POSITION TO DATUM "D" WHEN FLUNED TO PLANE A AND PLANE B.



REVISIONS				
ZONE	LTR	DESCRIPTION	DATE	APPROVED
A		ECN 104620 S ALLEN 9-30-82 DIM 14 WAS:150. ADDED TWD ADDITIONAL TABS ON BOARD OUTLINE. ADDED DIMS. 317, 318, AND 319. DELETED DIM. 6. ADDED DIM 16.	2/12/82 12/1/82	<i>[Signature]</i>
B		ECN NO:105757 Char. Ver. JAN. 26, 83 1. BOARD OUTLINE IS CHANGED. 2. PANEL OUTLINE IS CHANGED. 3. ALL LAYERS AFFECTED. 4. HOLE SIZE AND LOCATION AFFECTED	1-30-83 2-0-83	<i>[Signature]</i>
C		ECN NO:106218 Char. Ver. 3-23-83 1. BOARD OUTLINE IS CHANGED AND CARD EDGE CONNECTOR IS EXTEND 2. PANEL OUTLINE IS CHANGED. 3. NOTES 22 AND 23 ARE FOR CARD EDGE CONNECTOR ONLY.	3/3/83 3/25/83	<i>[Signature]</i>

LTR	FINISHED HOLE DIA	REMARKS
G	.200 ±.004 ±.002	
F	.062 ±.005 ±.003	INTL TOOLING
E	.046 ±.006 ±.002	
D	.039 ±.002	
C	.031	UNLETTERED
B	.125 ±.006 ±.002	INTL TOOLING
A	SHOP OPTION	EXTL TOOLING
	UNSUPPORTED PLATED THRU	
	* .064 * .061	

HOLE SCHEDULE

INVENTORY CONTROL NUMBER	1	2	3
THIS DRAWING	-	A	B
HOLE CONFIGURATION	-	A	B
DRILL DECK			
LAYER 1 (COND. SIDE)	-	A	B
LAYER 2 (COND. SIDE)	-	A	B
MARKING			
CONDUCTOR SIDE			
SOLDER MASK	-	A	B
COMPONENT SIDE			
SOLDER MASK	-	A	B

REVISION LEVEL CONTROL

DIMENSION IDENTIFIERS	
LAST USED	NOT USED
101-130	116

UNLESS OTHERWISE SPECIFIED
 • DIMENSIONS ARE IN INCHES
 • TOLERANCES UNLESS SHOWN OTHERWISE:
 1 PLACE DECIMALS ± .010
 2 PLACE DECIMALS ± .002
 • DIMENSIONING IN ACCORDANCE WITH ANSI Y14.5

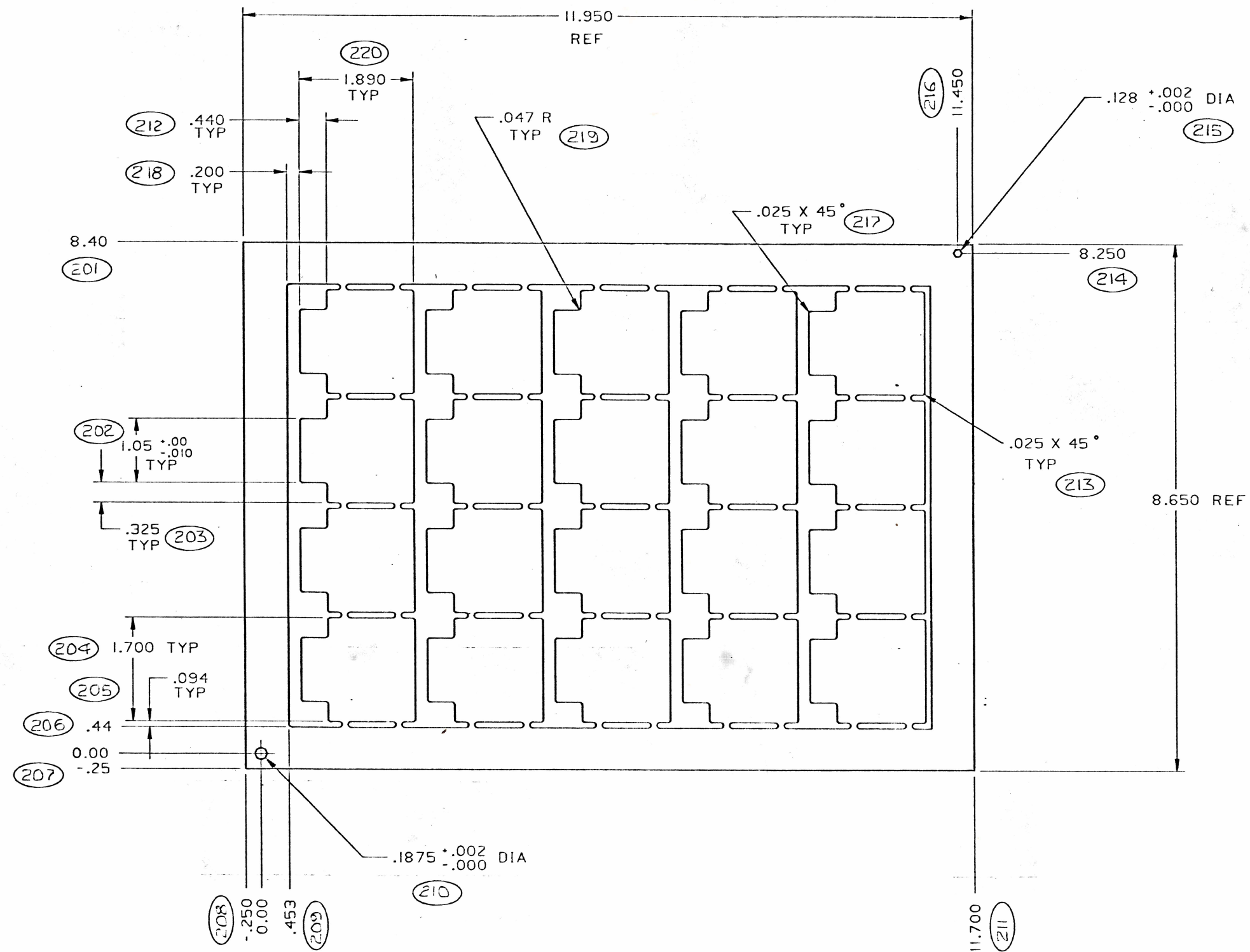
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 SHK: *[Signature]* B 6-3-82
 ELECT. ENG: *[Signature]*
 TOOLING ENG: *[Signature]*
 MFG. ENG: *[Signature]*
 PROD. ENG: *[Signature]*
 3/23/83
 3/23/83
 3/23/83

TYPE II

TEXAS INSTRUMENTS
 INCORPORATED
 CALCULATOR PRODUCTS DIVISION

PRINTED WIRING BOARD,
 PRODUCT 477

SUP. DWG. MP SIZE D DRAWING NO. 1044512
 SCALE: NONE REL. LTR. C SHEET 2 OF 2



DIMENSION IDENTIFICATION NUMBERS	
USED	NOT USED
201 - 220	

THIS IS A COMPUTER GENERATED ORIGINAL
DO NOT REVISE MANUALLY

TEXAS INSTRUMENTS

DWG DATE 3-23-83

SCALE

DWG NO 1044512